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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,216	11/20/2001	James A. Aviani	CIS01-15(4174)	8123

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EXAMINER

GILLIS, BRIAN J

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/044,216

Applicant(s)

AVIANI ET AL.

Examiner

Brian Gillis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4-9, 11, 12, 14-19, 21, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Barker et al (US Patent #5,931,916).

3. (Claims 1, 11, 21, and 22 disclose) a method, device, and computer program product for inserting data into packets associated with a communications session between a first and second computerized devices, the method comprising the steps of: receiving a first packet containing data, being propagated from the first computerized device to the second computerized device in the communications session (Barker et al shows an Internet protocol module receiving data from a user datagram protocol (UDP) processor to a destination process (column 3, lines 42-45).); inserting a first amount of extra data into the first packet to alter the size of the first packet (Barker et al shows additional information being added into a header (column 3, lines 35-37); and forwarding the first packet including the first amount of extra data to the second computerized device (Barker et al shows the datagram being passed to a destination process (column 3, lines 42-45)).

(Claims 2 and 12 disclose) the method and device of claims 1 and 11 further comprising the steps of: receiving a second packet being propagated from the second

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computerized device to the first computerized device in the communication session, the second packet including acknowledgment information for the first packet acknowledging receipt of the first packet by the second computerized device (Barker et al shows an acknowledge signal being sent to the transmitting node (column 5, lines 40-42)); adjusting the acknowledgment information in the second packet based upon the first amount of extra data inserted into the first packet (Barker et al shows a return datagram being sent with modified acknowledge information (column 5, lines 17-20)); and forwarding the second packet including the adjusted acknowledgment information to the first computerized device such that the first computerized device receives the adjusted acknowledgement information that properly corresponds with a first connection state maintained by the first computerized device for the communications session between the first and second computerized devices (Barker et al shows a return datagram with the acknowledge information contained (column 5, lines 21-23)).

(Claim 4 and 14 disclose) the method and device of claims 1 and 11 further comprising the steps of: adjusting sequence information in a subsequent packet being propagated, after the first packet, from the first computerized device to the second computerized device to account for the extra data added into the first packet (Barker et al shows such data will be transferred sequentially once a first successful data transfer has occurred (column 5, lines 57-60)); and forwarding the subsequent packet including the adjusted sequence information to the second computerized device such that the second computerized device receives the adjusted sequence information that properly corresponds with a second connection state maintained the second computerized

device for the communications session between the first and second computerized devices (Barker et al shows data will be transferred sequentially once a first successful data transfer has occurred and the transmitting node has received a valid return datagram including the correct sequence number and setting of the appropriate flag (column 5, lines 57-62).

(Claims 5 and 15 disclose) the method and device of claims 4 and 14 the step wherein of adjusting sequence information in a subsequent packet comprises the step of adding to the sequence information a value equal to the first amount of extra data added to the first packet such that the step of forwarding the subsequent packet causes the second computerized device to receive the adjusted sequence information (Barker et al shows a first packet with a sequence number being sent to a second device. This data is part of the extra data being added to the first packet. Once the second device receives this packet with the extra data a return packet is sent with an acknowledgement (column 5, lines 17-23)).

(Claims 6 and 16 disclose) the method and device of claims 2 and 12 comprising the steps of: continuing to exchange subsequent packets between the first and second computerized devices, and for each packet exchanged adjusting connection state information including sequence and acknowledgement information to account for extra data added into all packets exchanged between the first and second computerized devices such that the first and second computerized devices are able to maintain proper respective first and second connection states (Barker et al shows exchanging

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messages up to a specified number before an acknowledge of the modified datagrams keeping the connection states current between the two devices (column 6, lines 28-32)).

(Claims 7 and 17 disclose) the method and device of claims 1 and 11 comprising the steps of: maintaining connection state data in the data communications device that tracks an amount of extra data inserted into packets exchanged between the first and second computerized devices (Barker et al shows check sum bytes being used to verify the amount and prevent datagram corruption (column 3, lines 16-19).); and modifying connection information within packets passing through the data communications device that are exchanged between the first and second computerized devices to allow the first and second computerized devices to maintain proper respective first and second connection states regardless of the amount of extra data added in the packets (Barker et al shows flags that were modified in transmission to maintain proper respective states (column 11, lines 53-58)).

(Claims 8 and 18 disclose) the method and device of claims 7 and 17 wherein the step of modifying connection information comprises at least one of the steps of: adjusting sequence information within the packets exchanged between the first and second computerized devices (Barker et al shows a sequence number bit is examined to determine if it was adjusted in transmission (column 9, line 51-53).); adjusting acknowledgement information within the packets exchanged between the first and second computerized devices (Barker et al shows an analysis of the acknowledge bit to determine if it was adjusted during transmission (column 10, lines 5-7).); adjust error correction information within the packets exchanged between the first and second

computerized devices (Barker et al shows a check sum byte which is examined to determine if it was adjusted due to a transmission error (column 3, lines 39-41).) ; and adjust packet length information within the packets exchanged between the first and second computerized devices (Barker et al shows a packet length byte which may be adjusted when the datagram is transmitted (column 3, lines 38-39)).

(Claims 9 and 19 disclose) the method of claim 7 comprising the steps of: receiving a second packet being propagated from the second computerized device to the first computerized device in the communication session, the second packet including acknowledgment information for the first packet acknowledging receipt of the first packet by the second computerized device (Barker et al shows upon receipt of a datagram the receiving driver will return a datagram with an acknowledgement (column 5, lines 17-23).); adjusting the acknowledgment information in the second packet based upon the first amount of extra data inserted into the first packet (Barker et al shows the return datagram is adjusted according to the information sent in the first packet (column 5, lines 21-23).); and inserting a second amount of extra data into the second packet to alter the size of the second packet (Barker et al shows data is inserted to each packet being sent inherently meaning a second packet (column 3, lines 35-37).); and forwarding the second packet including the adjusted acknowledgement information and the second amount of extra data to the first computerized device such that the first computerized device receives the adjusted acknowledgement information that properly corresponds with a first connection state maintained by the first computerized device for the communications session between the first and second computerized devices and

further receive the second amount of extra data (Barker et al shows the receiving driver will return a packet with acknowledgement along with inserted data to the first device to correspond to the first connection state (column 3, lines 35-37 and column 5, lines 21-23).); and wherein the step of maintaining connection state data in the data communications device that tracks an amount of extra data inserted into packets exchanged between the first and second computerized devices tracks the second amount of extra data inserted into the second packet (Barker et al shows a check sum byte which is used check on transmission errors which tracks the extra data inserted into the packet (column 3, lines 16-19 and 39-41).); and wherein the step of modifying connection information within packets passing through the data communications device that are exchanged between the first and second computerized devices modifies connection information with packets exchanged between the first and second computerized devices subsequent to the first and second packets such that the first and second amount of extra data to not adversely effect respective first and second connection states respectively maintained in the first and second computerized devices (Barker et al shows an acknowledge window is set to make sure all packets are acknowledged upon receipt to prevent any adverse effects in the connection states (column 11, lines 45-50)).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the



invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barker et al (US Patent #5,931,916) in view of Muller et al (US Patent # 6,128,666).

Claims 3 and 13 disclose the method and device of claims 2 and 12 wherein the step of adjusting the acknowledgement information comprises the step of subtracting from the acknowledgement information a value equal to the first amount of extra data added to the first packet. Barker et al teaches of the limitations of claims 2 and 12 as recited above (column 5, lines 17-23 and 40-42). It fails to teach of subtracting from the acknowledgement information a value equal to the first amount of extra data added to the first packet. Muller et al teaches of a tag removal of the inserted data from the packet upon transferring of the packet (column 10, lines 15-25).

Barker et al and Muller et al are analogous art because they are both related to packet distribution.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the tag removal of inserted data in Muller et al and adapt it to the method and device in Barker et al because doing so provides minimal impact on performance of the network (column 1, lines 62-65).

5. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barker et al (US Patent #5,931,916) in view of Masters (US Patent #6,374,300).

Claims 10 and 20 disclose the method and device of claims 1 and 11 wherein the first packet contains a hypertext transport protocol packet requesting data from a hypertext transport protocol server accessible by the second computerized device.

Barker et al teaches of the limitations of claims 1 and 11 as recited above (column 3, lines 35-37 and 42-45). It fails to teach of the packet containing a hypertext transport protocol (HTTP) requesting data from a hypertext transport protocol server. Masters teaches of a HTTP request being sent from a client to a server (column 6, lines 46-55).

Barker et al and Masters are analogous art because they are both related to packet data management.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the HTTP request in Masters with the method and device in Barker et al because the insertion of this request allows to examine the connections for the purpose of reliably, conveniently and persistently directing connections to the same destination (column 6, lines 20-25).

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Honig et al (US Patent # 6,542,470) teaches of packet expansion with preservation of original cyclic redundancy code check indication. Billings (US Patent #6,076,117) teaches of a packet merging hub system. Billings et al (US Patent #6,115,747 teaches of a computer network interface that merges remote data received with local data. Bunn et al (US PGPUB #US2002/0073227) teaches of encoding for modem header suppression.

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Gillis whose telephone number is 571-272-7952. The examiner can normally be reached on M-F 7:45-4:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian Gillis  
Examiner  
Art Unit 2141

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